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What is claimed is:

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2	telephone wiring network to separate certain high frequency signals on the home
3	telephone wiring network from the POTS device, the filter comprising:
4	a first coupled inductor having a pair of windings wrapped about a core;
5	a second coupled inductor having a pair of windings wrapped about a core;
6	a capacitive element disposed between the first and the second coupled inductors
7	and separated from the home telephone wiring network by either the first or the second
8	coupled inductor to prevent high frequency signals from being shorted across the
9	capacitor regardless of whether the home telephone wiring network is coupled to the
10	filter adjacent to the first or the second coupled inductor;
11	a first resistive element disposed in parallel with the one of the windings of the
12	first coupled inductor and a second resistive element disposed in parallel with the other

An odd-order low-pass filter for insertion between a POTS device and a home

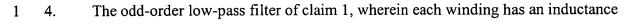
1 2. The odd-order low-pass filter of claim 1, wherein the capacitive element has a

first coupled inductor and a capacitive element of the associated POTS device.

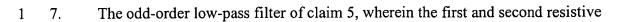
winding of the first coupled inductor to reduce resonance of certain signals between the

- 1 3. The odd-order low-pass filter of claim 1, wherein the first and second resistive
- 2 elements each have a resistance in the range of 500 5000 ohms.

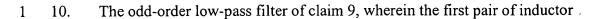
capacitance in the range of 22-68 nanofarads.



- 2 in the range of 3 8 mH.
- 1 5. In a communications network including a DSL modem, a POTS device, and a
- 2 caller ID device coupled to in-premises telephone wiring, an odd-order low pass filter
- 3 comprising:
- a first coupled inductor having a pair of windings wrapped about a core;
- 5 a second coupled inductor having a pair of windings wrapped about a core;
- a capacitive element disposed between the first and the second coupled inductors
- 7 and separated from the home telephone wiring network by either the first or the second
- 8 coupled inductor to prevent high frequency signals from being shorted across the
- 9 capacitor regardless of whether the home telephone wiring network is coupled to the
- 10 filter adjacent to the first or the second coupled inductor;
- a first resistive element disposed in parallel with the one of the windings of the
- 12 first coupled inductor and a second resistive element disposed in parallel with the other
- winding of the first coupled inductor, the first and second resistive elements preventing
- resonance of certain signals between the first coupled inductor and capacitive elements of
- 15 the associated POTS device from interfering with operation of the caller ID device.
- 1 6. The odd-order low-pass filter of claim 5, wherein the capacitive element has a
- 2 capacitance in the range of 22-68 nanofarads.



- 2 elements each have a resistance in the range of 500 5000 ohms.
- 1 8. The odd-order low-pass filter of claim 5, wherein each winding has an inductance
- 2 in the range of 3 8 mH.
- 1 9. An odd-order low-pass filter for insertion between a POTS device and a home
- 2 telephone wiring network to separate certain high frequency signals on the home
- 3 telephone wiring network from the POTS device, the filter comprising:
- 4 a first pair of inductor windings;
- a second pair of inductor windings, each of the second pair of windings disposed
- 6 in series with one of the windings of the first pair of windings;
- 7 a capacitive element disposed between the first and the second pairs of inductor
- 8 windings and separated from the home telephone wiring network by the first pair of
- 9 inductor windings to prevent high frequency signals from being shorted across the
- 10 capacitor;
- a first resistive element disposed in parallel with the one of the second pair of
- inductor windings and a second resistive element disposed in parallel with the other
- 13 winding of the first pair of inductor windings to reduce resonance of certain signals
- between the first coupled inductor and a capacitive element of the associated POTS
- 15 device.



- 2 windings are both wrapped about a first inductor core and the second pair of inductor
- 3 windings are both wrapped about a second inductor core.
- 1 11. The odd-order low-pass filter of claim 9, wherein the first and second resistive
- 2 elements each have a resistance in the range of 500-5000 ohms.